

## **Method of Producing a Micro-Electromechanical Element**

### CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a 371 of PCT/EP99/0724, filed September 29, 1999, which claims priority to German applications 19857741.9, filed December 15, 1998 and 19927970.5, filed June 18, 1999, each of which is incorporated herein in its entirety by this reference thereto.

### BACKGROUND OF THE INVENTION

#### Field of the Invention

The present invention relates to a method of producing a micro-electromechanical element, and, more specifically, to a micro-electromechanical element which is implemented such that a micromechanical structure and electronic components are arranged in the same semiconductor wafer.

#### Description of Prior Art

Due to the fast development in the field of semiconductor industry and microelectronics, micromechanical elements, e.g. silicon-based micromechanical pressure measurement cells, replace classical mechanical pressure transducers more and more. Micromechanical elements are used in great amounts e.g. in the fields of automation technology and medical engineering as well as in automotive vehicles. The systems preferably used in this connection are micro-electromechanical integrated systems which realize the combination of mechanical and electronic functions on one substrate. In addition to the electronic components produced in CMOS or similar technologies, which are e.g. measuring transducers, amplifiers, storage means, microcontrollers, etc., mechanical components exist in the same layers. These mechanical components may e.g. be diaphragms of pressure sensors, elastic sheets of valves or pumps, oscillating masses of acceleration sensors, movable